

**REMARKS**

Applicants thank the Examiner for the very thorough consideration given the present application. Claims 1, 6, 9-11, 13-14, 19-20, 22 and 24-31 are currently pending in this application. No new matter has been added by way of the present amendment. Claims 1 and 24 have been amended to more clearly recite the subject matter claimed. Accordingly, no new matter has been added.

In view of the amendments and remarks herein, as well as the remarks filed on April 29, 2008, which are incorporated herein in their entirety, Applicants respectfully request that the Examiner withdraw all outstanding rejections and allow the currently pending claims.

**Issues under 35 USC 103(a)**

Claims 1, 6, 9-11 and 19 have been rejected under 35 USC 103(a) as being unpatentable over Kaido '123 (USP 6,136,123) in view of Kotani '560 (USP 5,700,560) or Kotani '093 (USP 3,316,093) and further in view of Feeney '598 (WO 98/56598). Additionally, claims 13, 14, and 20-31 have been rejected under 35 USC 103(a) as being unpatentable over Kaido '123 in view of at least one of Kotani '560 or Kotani '093 and Feeney '598, and further in view of Kresge '372 (USP 5,576,372) and Hopkins '948 (US 2001/0009948). Applicants respectfully traverse.

As to the rejection of claims 1, 6, 9-11 and 19, it is respectfully submitted that this rejection has been overcome, since claim 1 has been amended so as to incorporate the subject matter of previous claims 21 and 23 which were not rejected based on the specific combination of references cited above. Thus, it is requested that the above rejection be withdrawn.

As to the rejection of claims 13, 14, and 20-31 have been rejected under 35 USC 103(a) as being unpatentable over Kaido '123 in view of at least one of Kotani '560 or Kotani '093 and Feeney '598, and further in view of Kresge '372 and Hopkins '948, Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Additionally, there must be a reason why one of ordinary skill in the art would modify the reference or combine reference teachings to obtain the invention. A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. *KSR Int'l Co. v Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007). There must be a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *Id.* The Supreme Court of the United States has recently held that the "teaching, suggestion, motivation test" is a valid test for obviousness, albeit one which cannot be too rigidly applied. *Id.* Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *Id.*

#### *Present Invention and Its Advantages*

The present invention is directed, *inter alia*, to a tubeless tire having a gas barrier layer and an inner liner layer, wherein the inner liner layer is formed from a rubber composition that

contains silica as an inorganic filler, and wherein the gas barrier is formed of a gas barrier polyvinyl alcohol resin composition.

Applicants have discovered that the use of this type of inner liner layer results in unexpected and superior properties, including adequate adhesion to the gas barrier layer, which results in an advantageous rate of decrease in pressure after machining, as well as an advantageous appearance exhibited by the gas barrier layer. The employment of this type of inner linear layer also advantageously provides for adequate adhesion of the carcass layer to the gas barrier layer which provides for advantageous tire durability.

As evidenced by the Declaration under 37 CFR 1.312 filed on April 29, 2008, rubber compositions containing silica as the inorganic filler and polyvinyl alcohol in the gas barrier layer resin exhibit advantageously overall improved properties with regard to the rate of decrease in pressure after machining and the appearance of the gas barrier layer (see Examples 1-12).

#### Distinctions over Cited References

Applicants respectfully submit that Kaido '123, Kotani '560, Kotani '093 and Feeney '598 all fail to disclose or suggest the employment of an inner liner layer or carcass layer containing silica as an inorganic filler, as presently claimed. Moreover, these references also fail to recognize or address the issues concerning improved adhesion to a gas barrier layer, which issues are addressed and advantageously improved by employment of the inorganic filler in the tire of the present invention as recited in the present claims.

Kresge '372 discloses a composition for tire inner liners, which includes a layered silicate compound. The inner liner composition preferably includes a complex rubber formed from a

"reactive" rubber and the layered silicate compound, as well as a "solid" rubber. Kresge '372 does not teach or suggest a tubeless tire as presently claimed.

Hopkins '948 discloses an elastomeric butyl compound combined with a mineral filler to form a composition used to make tires. Hopkins '948 fails to teach or suggest a tire structure having a gas barrier layer formed on an inner face of an inner liner layer or carcass layer as in the present invention.

Evidently, the cited references, alone or in combination, fail to teach or suggest a tubeless tire as presently claimed. For this reason alone, this rejection is improper and should be withdrawn. Moreover, Applicants respectfully submit that references cannot be arbitrarily combined. There must be some reason why one of ordinary skill in the art would be motivated to make the proposed combination of the primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). Courts have clearly established that, even when a combination of references teaches every element of a claimed invention, a rejection based on a *prima facie* case of obviousness is improper absent a motivation to combine. *In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998).

For instance, Kaido '123 fails to disclose or mention anything regarding any of the: (i) dispersed exfoliated layered filler and surfactant required in the composition of Feeney '598; (ii) layered silicate component required in the composition of Kresge '372; or (iii) mineral filler compound described at paragraphs [0019]-[0020] of Hopkins '948. None of the examples of Kaido '123 include any of these compounds which are all required for the other references. In addition, all of Feeney '598, Kresge '327 and Hopkins '948 fail to disclose or suggest the use of a tire inner liner which includes polyamide resins, PVA or EVOH, among other potential resins

used in the thermoplastic film disclosed by Kaido '123. Thus, these references can not be combined as asserted.

Moreover, both Kotani '560 and Kotani '093 relate to gas barrier resin compositions used for the preservation of foods. The other references are directed to tire applications. Thus, the Kotani references cannot be combined with any of the other references. The latest Office Action fails to identify a basis for one skilled in the art to ignore the clear differences between addressing food packaging and storage issues versus addressing tire durability and performance property issues.

Because the invention, as set forth in Applicants' claims, is not disclosed or made obvious by the cited prior art, reconsideration and withdrawal of this rejection are respectfully requested.

### **Conclusion**

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and objections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Andrew D. Meikle, Reg. No. 32,868 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.147; particularly, extension of time fees.

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Respectfully submitted,

By  \_\_\_\_\_

Andrew D. Meikle

Registration No.: 32,868

BIRCH, STEWART, KOLASCH & BIRCH, LLP

8110 Gatehouse Road

Suite 100 East

P.O. Box 747

Falls Church, Virginia 22040-0747

(703) 205-8000

Attorney for Applicant